



**LAW**

ENGINEERING AND ENVIRONMENTAL SERVICES

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MAY 21 1993

Winston-Salem  
Regional Office

April 28, 1993

Montgomery Ward and Co., Inc.  
140 Clearwater Mall  
Clearwater, FL 34624

Attention: Mr. Ted Strand

Subject: Report of Underground Storage Tank Removal  
Montgomery Ward Auto Center  
Carolina Circle Mall  
Greensboro, North Carolina  
Law Engineering Job No. 259-00424-01

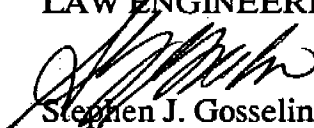
Dear Mr. Strand:

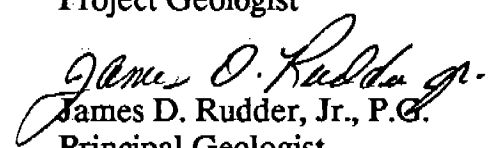
As authorized by your acceptance of our Proposal Number PGB-032E3 dated January 25, 1993, Law Engineering is pleased to submit our Report of Underground Storage Tank Removal for the Montgomery Ward Auto Service Center in Greensboro, North Carolina. Included in this report is a description of our activities, the results obtained and our conclusions and recommendations.

Law Engineering appreciates the opportunity to serve as your environmental consultant on this project. We will call you in several days to discuss this report.

Sincerely,

LAW ENGINEERING, INC.

  
Stephen J. Gosselin  
Project Geologist

  
James D. Rudder, Jr., P.G.  
Principal Geologist

LAW ENGINEERING, INC.  
7347-F WEST FRIENDLY AVENUE  
GREENSBORO, NC 27410

919-294-4221  
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ONE OF THE LAW COMPANIES



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### 1.0 PROJECT INFORMATION

The site is located at 100 Carolina Circle Mall in Greensboro, North Carolina. The site is currently operated as a retail sales and automotive service facility.

One 2000 gallon fiberglass underground tank (UST) previously used to collect waste oil generated from automotive services was located at the site. The tank was covered with a four feet by four feet square layer of non-reinforced concrete having an approximate thickness of four inches. The tank was installed in 1976.

Mr. Ted Strand of Montgomery Ward contracted Law Engineering to remove the UST after receiving a notice of compliance for leak detection from the North Carolina Department of Environment, Health, and Natural Resources (notice dated December 16, 1992).

At the request of Mr. Strand, Law Engineering conducted a pre-bid meeting with at least three subcontractors experienced in UST excavation and removal. Those subcontractors and their bids were as follows:

<u>SUBCONTRACTOR</u>	<u>BID</u>
Reich Grading	\$3,000.00
DAACO, Inc.	\$3,492.52
Arnold & Assoc.	No Bid



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The above information was developed from conversations between Mr. Steve Gosselin of Law Engineering and Mr. Ted Strand of Montgomery Ward, Inc.

## **2.0 CONTRACTED SCOPE OF SERVICES**

Law Engineering was contracted to complete the following scope of services:

### **UST REMOVAL AND CONFIRMATION SAMPLING**

- Prior to UST excavation activities, we would submit any necessary UST closure notifications to the appropriate state and local agencies.
- We would prepare a Site Specific Health and Safety Plan for the proposed on-site activities.
- We would contract with a sub-contractor trained and experienced in similar projects to perform the excavation and backfill activities.
- We would remove and dispose of one 2000 gallon UST formerly used to store waste oil. A certificate of appropriate disposal would be provided.
- The excavated subsurface material would be stockpiled adjacent to the excavation pending sample collection and analysis.



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- We would collect up to two soil samples from beneath the UST. One duplicate sample would be collected for quality control purposes. The samples would be screened in the field with an organic vapor analyzer (OVA) to assess for the presence or absence of detectable volatile organic compounds.
- Each sample collected would be appropriately preserved and shipped to Law Environmental National Laboratories (LENL) in Kennesaw, Georgia. LENL would analyze the samples for oil and grease (EPA Method 9071), semi-volatile priority pollutants (EPA Method 8270), volatile priority pollutants (EPA Method 8240) and metals using the toxicity characteristic leaching procedure (TCLP).
- After receiving the analytical results, we would backfill the excavation. The excavation would be backfilled with clean fill material placed in thin lifts and compacted to at least 95 percent of the standard Proctor maximum dry density (ASTM D698). Law Engineering would perform standard Proctors on all potential fill material. Compaction monitoring would be performed during the backfilling activities.
- We would replace the concrete pavement removed to access the UST system with asphalt (i.e., minimum of two inches of asphalt).
- We would prepare a written report which describes our field activities, the results obtained, and our conclusions and recommendations.



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### **3.0 UST REMOVAL ACTIVITIES**

#### **3.1 Site Description**

The site is located at 100 Carolina Circle Mall in a commercially developed section of Greensboro, North Carolina. The site is currently being utilized as a retail sales and automotive service center. Water and sewer facilities at the site are provided by the City of Greensboro.

#### **3.2 UST Excavation**

The ground surface at the location consisted of a four feet by four feet square layer of non-reinforced concrete approximately four inches thick. This concrete pad was surrounded by two-inch thick asphalt paving. The top of the UST was approximately three feet below the ground surface. The site soils were characterized as a medium to coarse yellow sand (fill material) to the final excavation depth of approximately 12 feet.

Law Engineering subcontracted with Reich Grading, Inc. of Winston-Salem, North Carolina to perform the on-site UST excavation and removal activities. Product in the tank was removed from the tank prior to excavation.

Excavation and removal of the 2000 gallon waste oil UST was conducted on March 25, 1993. A backhoe was utilized to complete the excavation and removal activities. After removing the



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waste oil UST from the ground, the UST was transported to Safeway Tank Disposal in Colfax, North Carolina. Underground piping associated with the UST was removed and disposed of following completion of the UST excavation activities. A copy of the certificate of disposal for the UST is included in the Appendix.

During UST excavation activities, the soils surrounding the UST and associated piping were excavated and stockpiled on plastic (on site) pending laboratory test results.

### **3.3 UST Confirmation Sampling**

During UST excavation activities, one soil sample (E-1, Figure 2) was collected from the excavation. Because the UST was less than six feet in length, the sample was collected from material directly below the center of the former UST.

The soil sample was manually collected from the bucket of the on-site backhoe using new disposable vinyl gloves. The soil sample was then placed into four new, four-ounce capacity clean glass containers equipped with teflon-lined screw-on caps.

After being filled, each sample container was labeled with the job name and number, the time and date of sample collection, the analysis to be performed and the absence or presence of preservative. The sample containers were then placed into a cooler. Zip-lock baggies filled with ice were placed around the sample containers in the cooler to maintain sample temperature at approximately four degrees Centigrade.



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The Chain of Custody was initiated. At the end of the sampling day, the cooler containing the sample containers was shipped via overnight express delivery to LENL. The Chain of Custody was maintained, as documented in the Appendix.

### **3.4 OVA Screening**

Representative portions of each soil sample collected from the bucket of the backhoe were transferred into a new, clean one quart zip-lock baggy (half full) and the baggy placed in a warm location. Approximately ten minutes after the time of collection, the baggy was opened slightly, the probe of a Century 128 Organic Vapor Analyzer (OVA) inserted, and the baggy immediately resealed using finger pressure. The meter of the OVA was monitored and the reading recorded.

An OVA is useful only as a screening tool in evaluating the absence or presence of volatile organic compounds (VOCs) in soil and should not be relied upon to quantify VOCs in soil samples. The results of the OVA screening are included as Table 1.

### **3.5 Results of Laboratory Analysis**

Soil sample E-1 was analyzed for the following parameters:

- Oil and Grease (EPA Method 9071)
- Semi-Volatile Priority Pollutants (EPA Method 8270)
- Volatile Priority Pollutants (EPA method 8240)
- TCLP Metals





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The laboratory test results for confirmation sample E-1 are as follows:

Laboratory Test Results in Soil in PPM

Parameter	Depth	Results in PPM
Oil and Grease	12 feet	11
Semi-Volatile Priority Pollutants	12 feet	ND
Volatile Priority Pollutants	12 feet	ND
Barium (TCLP Metals)	12 feet	1.1

PPM = Parts Per Million

ND = Not Detected

The laboratory data sheets are included in the Appendix.

### 3.6 Backfilling and Compaction Monitoring

After UST removal activities had been completed (based on results of confirmation sampling), the bottom of the excavation was lined with approximately one foot of surge stone. The remainder of the excavation was backfilled with crusher run material. A sample of the backfill material was collected and a standard Proctor was performed in accordance with ASTM D-698. A copy of the Proctor report is included in the Appendix.

The backfill material was placed in thin lifts and compacted. Based on the results of the Proctor, field tests of the compacted material indicated that fill material in the excavation was



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compacted to at least 100 percent of the standard Proctor maximum dry density. The report of the field density testing is included in the Appendix.

#### **4.0 QUALITY ASSURANCE/QUALITY CONTROL**

One duplicate soil sample was collected in the field and shipped to LENL for analysis for detectable oil and grease concentrations. The soil sample labeled duplicate was collected from sample location E-1. The analysis of this duplicate soil sample detected 24 parts per million (ppm) oil and grease. The analysis of the soil sample labeled E-1 detected 11 ppm oil and grease. This represents similar analytical results for similar samples.

#### **5.0 CONCLUSIONS**

The State of North Carolina remediation target level for oil and grease concentrations in soil is 250 ppm. For barium the remediation target level for soils is 100 ppm. Laboratory analyses of confirmation soil samples collected from beneath the UST at a depth of 12 feet detected a maximum concentration of 24 ppm oil and grease and 1.1 ppm barium.

Laboratory analyses detected no concentrations of volatile or semi-volatile priority pollutants in soil sample E-1.



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## **6.0 RECOMMENDATIONS**

Based on laboratory analysis of confirmation soil samples collected from beneath the 2000 gallon waste oil UST, no further assessment is recommended at this time.

## **7.0 QUALIFICATION OF REPORT**

The activities and evaluative approaches used in this project are consistent with those normally employed in hydrogeological assessments and waste management projects of this type. Our evaluation and remediation of site conditions has been based on our understanding of the site project information, and the data obtained during the underground storage tank removal and subsequent soil assessment activities.

## TABLES

**TABLE 1**

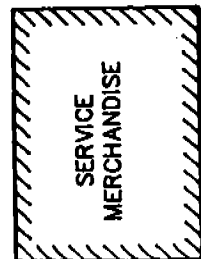
**Results of OVA Screening of Soil Samples  
Montgomery Ward Auto Center  
Greensboro, North Carolina  
Law Engineering Job No. 259-00424-01**

<b>SAMPLE LOCATION</b>	<b>PPM</b>	<b>DEPTH</b>
Sidewall	ND	4 Feet
Sidewall	ND	6 Feet
Sidewall	ND	8 Feet
Beneath Tank	ND	12 Feet

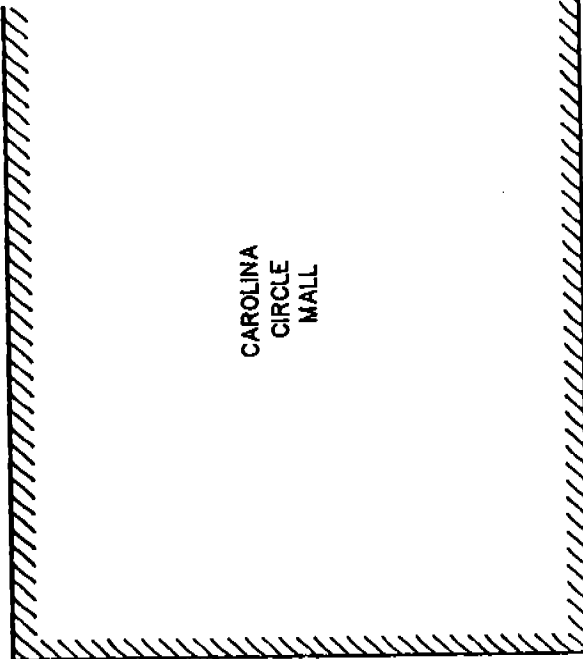
**ND = Not Detected**

**ppm = Parts Per Million**

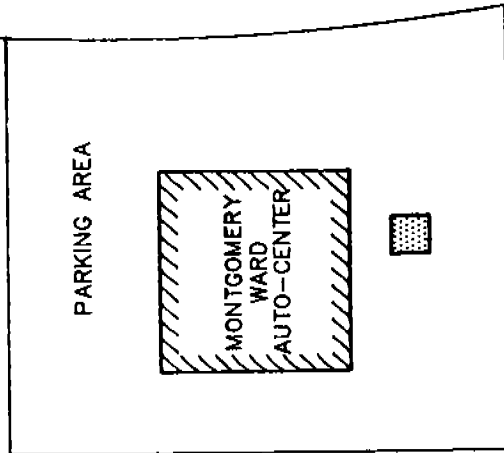
## FIGURES



SERVICE  
MERCHANDISE



CAROLINA  
CIRCLE  
MALL



PARKING AREA

MONTGOMERY  
WARD  
AUTO-CENTER



LEGEND

UST EXCAVATION SITE



CIRCLE MALL BLVD.

ALL LOCATIONS ARE APPROXIMATE.



**LAW ENGINEERING**

GREENSBORO, NORTH CAROLINA

**SITE PLAN**

MONTGOMERY WARD AUTO-CENTER  
GREENSBORO, NORTH CAROLINA

JOB NO. 258-00424-01

FIGURE 1

ACAD FILE MONTGS/SCALE60/AR

DRAWING NOT TO SCALE

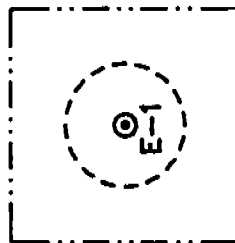
MONTGOMERY WARD AUTO-CENTER

GARAGE BAYS

PARKING AREA

LEGEND

- ⊙ E-1 SOIL SAMPLE LOCATION  
[ ] EXCAVATION AREA  
○ UNDERGROUND STORAGE TANK



ALL LOCATIONS ARE APPROXIMATE.



**LAW ENGINEERING**  
GREENSBORO, NORTH CAROLINA

**SAMPLE LOCATION PLAN**  
MONTGOMERY WARD AUTO-CENTER  
GREENSBORO, NORTH CAROLINA

DRAWING NOT TO SCALE

ACAD FILE MONTGS/P/LOTN/AR

JOB NO. 259-00424-01

FIGURE

2



## **APPENDIX**



LAW ENVIRONMENTAL NATIONAL LABORATORIES  
TEST DATA REPORT

Date 04/02/93

Page 1

--- Project Information ---

Lab Number : 63-6653-01  
Project No. : 259-00424-01  
Project Name : MONTGOMERY WARD AUTO CTR

Cust. No. :

Manager: STEVE GOSSELIN

--- Sample Information ---

Station ID : E-1  
Matrix : SO  
Type : GRAB  
Collector : RE

Sampled Date/Time : 03/25/93 13:00  
Received Date/Time : 03/26/93 11:00  
Received From/By : RE/ST  
Chain of Custody : 18864  
Number of Containers : 1

Remarks :

--- Test Data ---

Parameter..... Method.... Units PQL..... Results... Test Date Anal

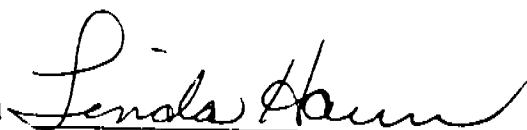
-- SAMPLE PREPARATION RESULTS --

Ext/TPRH/So/Sox	EPA 9071			NA	03/29/93	JSB
Moisture (Oven Dried @ 105 C)	EPA 160.3M wt %	1		15	03/29/93	JSB

--- SERIES 11000

Oil & Grease (Hydrocarbons)	EPA 9071	mg/kg	10	11	04/02/93	JSB
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Signed



LAW ENVIRONMENTAL NATIONAL LABORATORIES  
TEST DATA REPORT

Date 04/02/93  
Page 1

--- Project Information ---

Lab Number : 63-6653-02  
Project No. : 259-00424-01  
Project Name : MONTGOMERY WARD AUTO CTR

Cust. No. :

Manager: STEVE GOSSELIN

--- Sample Information ---

Station ID : DUPLICATE  
Matrix : SO  
Type : GRAB  
Collector : RE

Sampled Date/Time : 03/25/93 13:00  
Received Date/Time : 03/26/93 11:00  
Received From/By : RE/ST  
Chain of Custody : 18864  
Number of Containers : 1

Remarks :

--- Test Data ---

Parameter.....	Method....	Units	PQL.....	Results...	Test Date	Analyst
----------------	------------	-------	----------	------------	-----------	---------

-- SAMPLE PREPARATION RESULTS --

Ext/TPRH/So/Sox	EPA 9071			NA	03/29/93	JSB
Moisture (Oven Dried @ 105 C)	EPA 160.3M wt %	1		15	03/29/93	JSB

--- SERIES 11000

Oil & Grease (Hydrocarbons)	EPA 9071	mg/kg	10	24	04/02/93	JSB
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Signed

*Linda Hamm*

LAW ENVIRONMENTAL NATIONAL LABORATORIES  
TEST DATA REPORT

Date 04/12/93

Page 1

--- Project Information ---

Lab Number : 93-5233-01  
Project No. : 259-00424-01  
Project Name : MONTGOMERY WARD AUTO CTR.

Cust. No. :

Manager: STEVE GOSSELIN

--- Sample Information ---

Station ID : E-1  
Matrix : SO  
Type : GRAB  
Collector : RE

Sampled Date/Time : 03/25/93 13:00  
Received Date/Time : 03/26/93 12:50  
Received From/By : ST/LD  
Chain of Custody : 1255  
Number of Containers : 3

Parameter..... Method.... Units DL..... Results... Test Date Analy

-- INORGANIC CHEMISTRY RESULTS --

Parameter	Method	Units	DL	Results	Test Date	Analy
Moisture (Oven Dried @ 105C)	EPA 160.3M	%	1.0	17	03/26/93	JAR

-- METALS ANALYSIS - METALS PREP RESULTS --

Arsenic, TCLP	EPA 6010	mg/l	0.50	ND	03/31/93	JST
Barium, TCLP	EPA 6010	mg/l	1.0	1.1	03/31/93	JST
Cadmium, TCLP	EPA 6010	mg/l	0.10	ND	03/31/93	JST
Chromium, TCLP	EPA 6010	mg/l	0.50	ND	03/31/93	JST
Lead, TCLP	EPA 6010	mg/l	0.50	ND	03/31/93	JST
Mercury, TCLP	EPA 7470	mg/l	0.020	ND	04/06/93	CW
Selenium, TCLP	EPA 6010	mg/l	0.10	ND	03/31/93	JST
Silver, TCLP	EPA 6010	mg/l	0.50	ND	03/31/93	JST

--- SERIES 35000

T. Metals Prep: Aqueous ICP/Flame	EPA 3010			N/A	03/30/93	BS
T. Metals Prep: Solid, Hg	EPA 7471			N/A	04/05/93	CW
TCLP EXTRACTION	EPA 1311			EXTRACTED	03/29/93	BS

-- ORGANIC PREP RESULTS --

Ext/Acid/SO	3550/8270			N/A	03/30/93	CSH
Ext/Base Neutral/SO	3550/8270			N/A	03/30/93	CSH

--- SERIES 63000

Chloromethane	EPA 8240	ug/kg	10	ND	03/30/93	BS
Bromomethane	EPA 8240	ug/kg	10	ND	03/30/93	BS
Vinyl chloride	EPA 8240	ug/kg	10	ND	03/30/93	BS
Chloroethane	EPA 8240	ug/kg	10	ND	03/30/93	BS
Methylene chloride	EPA 8240	ug/kg	5	ND	03/30/93	BS
Acetone	EPA 8240	ug/kg	100	ND	03/30/93	BS
Carbon disulfide	EPA 8240	ug/kg	5	ND	03/30/93	BS
1,1-Dichloroethene	EPA 8240	ug/kg	5	ND	03/30/93	BS
1,1-Dichloroethane	EPA 8240	ug/kg	5	ND	03/30/93	BS

Remarks:

DL = Detection Limit

ND = Not Detected at the DL

Unless otherwise noted, all soil test results are calculated based on dry weight.

Signed

*Paul Brapp*

LAW ENVIRONMENTAL NATIONAL LABORATORIES  
TEST DATA REPORT

Date 04/12/93

Page 2

Lab Number : 93-5233-01

Project No. : 259-00424-01

Parameter.....	Method....	Units	DL.....	Results...	Test Date	Anal
--- SERIES 63000						
1,2-Dichloroethene, Total	EPA 8240	ug/kg	5	ND	03/30/93	BS
Chloroform	EPA 8240	ug/kg	5	ND	03/30/93	BS
1,2-Dichloroethane	EPA 8240	ug/kg	5	ND	03/30/93	BS
2-Butanone (MEK)	EPA 8240	ug/kg	100	ND	03/30/93	BS
1,1,1-Trichloroethane	EPA 8240	ug/kg	5	ND	03/30/93	BS
Carbon tetrachloride	EPA 8240	ug/kg	5	ND	03/30/93	BS
Vinyl acetate	EPA 8240	ug/kg	50	ND	03/30/93	BS
Bromodichloromethane	EPA 8240	ug/kg	5	ND	03/30/93	BS
1,2-Dichloropropane	EPA 8240	ug/kg	5	ND	03/30/93	BS
trans-1,3-Dichloropropene	EPA 8240	ug/kg	5	ND	03/30/93	BS
Trichloroethene	EPA 8240	ug/kg	5	ND	03/30/93	BS
Dibromochloromethane	EPA 8240	ug/kg	5	ND	03/30/93	BS
1,1,2-Trichloroethane	EPA 8240	ug/kg	5	ND	03/30/93	BS
Benzene	EPA 8240	ug/kg	5	ND	03/30/93	BS
cis-1,3-Dichloropropene	EPA 8240	ug/kg	5	ND	03/30/93	BS
2-Chloroethylvinyl ether	EPA 8240	ug/kg	10	ND	03/30/93	BS
Bromoform	EPA 8240	ug/kg	5	ND	03/30/93	BS
4-Methyl-2-pentanone	EPA 8240	ug/kg	50	ND	03/30/93	BS
2-Hexanone	EPA 8240	ug/kg	50	ND	03/30/93	BS
1,1,2,2-Tetrachloroethane	EPA 8240	ug/kg	5	ND	03/30/93	BS
Tetrachloroethene	EPA 8240	ug/kg	5	ND	03/30/93	BS
Toluene	EPA 8240	ug/kg	5	ND	03/30/93	BS
Chlorobenzene	EPA 8240	ug/kg	5	ND	03/30/93	BS
Ethylbenzene	EPA 8240	ug/kg	5	ND	03/30/93	BS
Styrene	EPA 8240	ug/kg	5	ND	03/30/93	BS
Xylene, Total	EPA 8240	ug/kg	5	ND	03/30/93	BS

-- GC/MS ORGANIC ANALYSIS (A) RESULTS --

Phenol	EPA 8270	ug/kg	330	ND	04/03/93	JBP
2-Chlorophenol	EPA 8270	ug/kg	330	ND	04/03/93	JBP
2-Methylphenol	EPA 8270	ug/kg	330	ND	04/03/93	JBP
4-Methylphenol	EPA 8270	ug/kg	330	ND	04/03/93	JBP
2-Nitrophenol	EPA 8270	ug/kg	330	ND	04/03/93	JBP
2,4-Dimethylphenol	EPA 8270	ug/kg	330	ND	04/03/93	JBP
Benzoic acid	EPA 8270	ug/kg	1600	ND	04/03/93	JBP
2,4-Dichlorophenol	EPA 8270	ug/kg	330	ND	04/03/93	JBP
4-Chloro-3-methylphenol	EPA 8270	ug/kg	660	ND	04/03/93	JBP
2,4,6-Trichlorophenol	EPA 8270	ug/kg	330	ND	04/03/93	JBP
2,4,5-Trichlorophenol	EPA 8270	ug/kg	330	ND	04/03/93	JBP
2,4-Dinitrophenol	EPA 8270	ug/kg	1600	ND	04/03/93	JBP
4-Nitrophenol	EPA 8270	ug/kg	1600	ND	04/03/93	JBP
4,6-Dinitro-2-methylphenol	EPA 8270	ug/kg	1600	ND	04/03/93	JBP
Pentachlorophenol	EPA 8270	ug/kg	1600	ND	04/03/93	JBP
bis(2-Chloroethyl) ether	EPA 8270	ug/kg	330	ND	04/03/93	JBP
1,3-Dichlorobenzene	EPA 8270	ug/kg	330	ND	04/03/93	JBP
1,4-Dichlorobenzene	EPA 8270	ug/kg	330	ND	04/03/93	JBP
1,2-Dichlorobenzene	EPA 8270	ug/kg	330	ND	04/03/93	JBP
Benzyl Alcohol	EPA 8270	ug/kg	660	ND	04/03/93	JBP

Signed

*Paul Brufford*

LAW ENVIRONMENTAL NATIONAL LABORATORIES  
TEST DATA REPORT

Date 04/12/93

Page 3

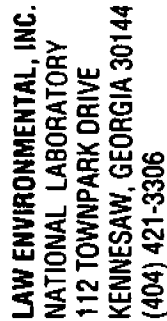
Lab Number : 93-5233-01

Project No. : 259-00424-01

Parameter.....	Method....	Units	DL.....	Results...	Test Date	Anal
<b>-- GC/MS ORGANIC ANALYSIS (A) RESULTS --</b>						
bis(2-Chloroisopropyl) ether	EPA 8270	ug/kg	330	ND	04/03/93	JBP
Hexachloroethane	EPA 8270	ug/kg	330	ND	04/03/93	JBP
N-Nitrosodi-N-propylamine	EPA 8270	ug/kg	330	ND	04/03/93	JBP
Nitrobenzene	EPA 8270	ug/kg	330	ND	04/03/93	JBP
Isophorone	EPA 8270	ug/kg	330	ND	04/03/93	JBP
bis(2-Chloroethoxy) methane	EPA 8270	ug/kg	330	ND	04/03/93	JBP
1,2,4-Trichlorobenzene	EPA 8270	ug/kg	330	ND	04/03/93	JBP
Naphthalene	EPA 8270	ug/kg	330	ND	04/03/93	JBP
4-Chloroaniline	EPA 8270	ug/kg	660	ND	04/03/93	JBP
Hexachlorobutadiene	EPA 8270	ug/kg	330	ND	04/03/93	JBP
2-Methylnaphthalene	EPA 8270	ug/kg	330	ND	04/03/93	JBP
Hexachlorocyclopentadiene	EPA 8270	ug/kg	330	ND	04/03/93	JBP
2-Chloronaphthalene	EPA 8270	ug/kg	330	ND	04/03/93	JBP
2-Nitroaniline	EPA 8270	ug/kg	660	ND	04/03/93	JBP
Dimethyl phthalate	EPA 8270	ug/kg	330	ND	04/03/93	JBP
Acenaphthylene	EPA 8270	ug/kg	330	ND	04/03/93	JBP
3-Nitroaniline	EPA 8270	ug/kg	1600	ND	04/03/93	JBP
Acenaphthene	EPA 8270	ug/kg	330	ND	04/03/93	JBP
Dibenzofuran	EPA 8270	ug/kg	330	ND	04/03/93	JBP
2,4-Dinitrotoluene	EPA 8270	ug/kg	330	ND	04/03/93	JBP
2,6-Dinitrotoluene	EPA 8270	ug/kg	330	ND	04/03/93	JBP
Diethyl phthalate	EPA 8270	ug/kg	1600	ND	04/03/93	JBP
Fluorene	EPA 8270	ug/kg	330	ND	04/03/93	JBP
4-Chlorophenylphenyl ether	EPA 8270	ug/kg	330	ND	04/03/93	JBP
4-Nitroaniline	EPA 8270	ug/kg	330	ND	04/03/93	JBP
N-Nitrosodiphenylamine	EPA 8270	ug/kg	330	ND	04/03/93	JBP
4-Bromophenylphenyl ether	EPA 8270	ug/kg	330	ND	04/03/93	JBP
Hexachlorobenzene	EPA 8270	ug/kg	330	ND	04/03/93	JBP
Phenanthrene	EPA 8270	ug/kg	330	ND	04/03/93	JBP
Anthracene	EPA 8270	ug/kg	330	ND	04/03/93	JBP
Di-n-butyl phthalate	EPA 8270	ug/kg	330	ND	04/03/93	JBP
Fluoranthene	EPA 8270	ug/kg	330	ND	04/03/93	JBP
Pyrene	EPA 8270	ug/kg	330	ND	04/03/93	JBP
Butylbenzyl phthalate	EPA 8270	ug/kg	330	ND	04/03/93	JBP
Benzo(a)anthracene	EPA 8270	ug/kg	330	ND	04/03/93	JBP
3,3'-Dichlorobenzidine	EPA 8270	ug/kg	660	ND	04/03/93	JBP
Chrysene	EPA 8270	ug/kg	330	ND	04/03/93	JBP
bis(2-Ethylhexyl) phthalate	EPA 8270	ug/kg	330	ND	04/03/93	JBP
Di-n-octyl phthalate	EPA 8270	ug/kg	330	ND	04/03/93	JBP
Benzo(b)fluoranthene	EPA 8270	ug/kg	330	ND	04/03/93	JBP
Benzo(k)fluoranthene	EPA 8270	ug/kg	330	ND	04/03/93	JBP
Benzo(a)pyrene	EPA 8270	ug/kg	330	ND	04/03/93	JBP
Indeno(1,2,3-cd)pyrene	EPA 8270	ug/kg	330	ND	04/03/93	JBP
Dibenzo(a,h)anthracene	EPA 8270	ug/kg	330	ND	04/03/93	JBP
Benzo(g,h,i)perylene	EPA 8270	ug/kg	330	ND	04/03/93	JBP

Signed

*Paul Bradford*



# CHAIN OF CUSTODY RECORD

**SAMPLING INFORMATION**

NAME OF FACILITY: MONTGOMERY WARD AUTO ETC.

STREET ADDRESS: 100 CAROLINA CIRCLE BLD.

CITY / STATE: GREENSBORO NC ZIP: \_\_\_\_\_

[illegible]

**\*MATRIX**

**WATER - W**

**SLUDGE - SL**

SOIL / SEDIMENT

OTHER - NA

OTHER - NA

**For Law Enforcement National Lab Use Only**

Are Custody Seals Present? Yes ☒ No ☐

Are Custody Seals Intact? Yes ☐ No ☒

N/A

**Inspected By:**

Date:





# LAW ENGINEERING

7347-F WEST FRIENDLY AVENUE, GREENSBORO, NC 27410

## REPORT OF FIELD DENSITY TESTS

CLIENT: MONTGOMERY WARDS

JOB NO.: 259-00424-01

PROJECT: MONTGOMERY WARDS  
GREENSBORO, NORTH CAROLINA

TEST NUMBER	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	PROCTOR NUMBER	COMPACTION (%)	SPECIFIED COMPACTION (%)	TEST METHOD	ELEVATION OR DEPTH
Tests Performed on 04/17/93							
1	5.4	141.9	1	100+	95	2	GRADE
2	5.5	140.0	1	100	95	2	GRADE
TEST LOCATIONS:							
1	TANK EXCAVATION BACKFILL						
2	TANK EXCAVATION BACKFILL						

### TEST COMPARED TO:

PROCTOR  
NUMBER

MAXIMUM DRY  
DENSITY  
(PCF)

OPTIMUM  
MOISTURE  
(%)

### REMARKS

Performed In General Accordance With:  
2 - ASTM D1556

1

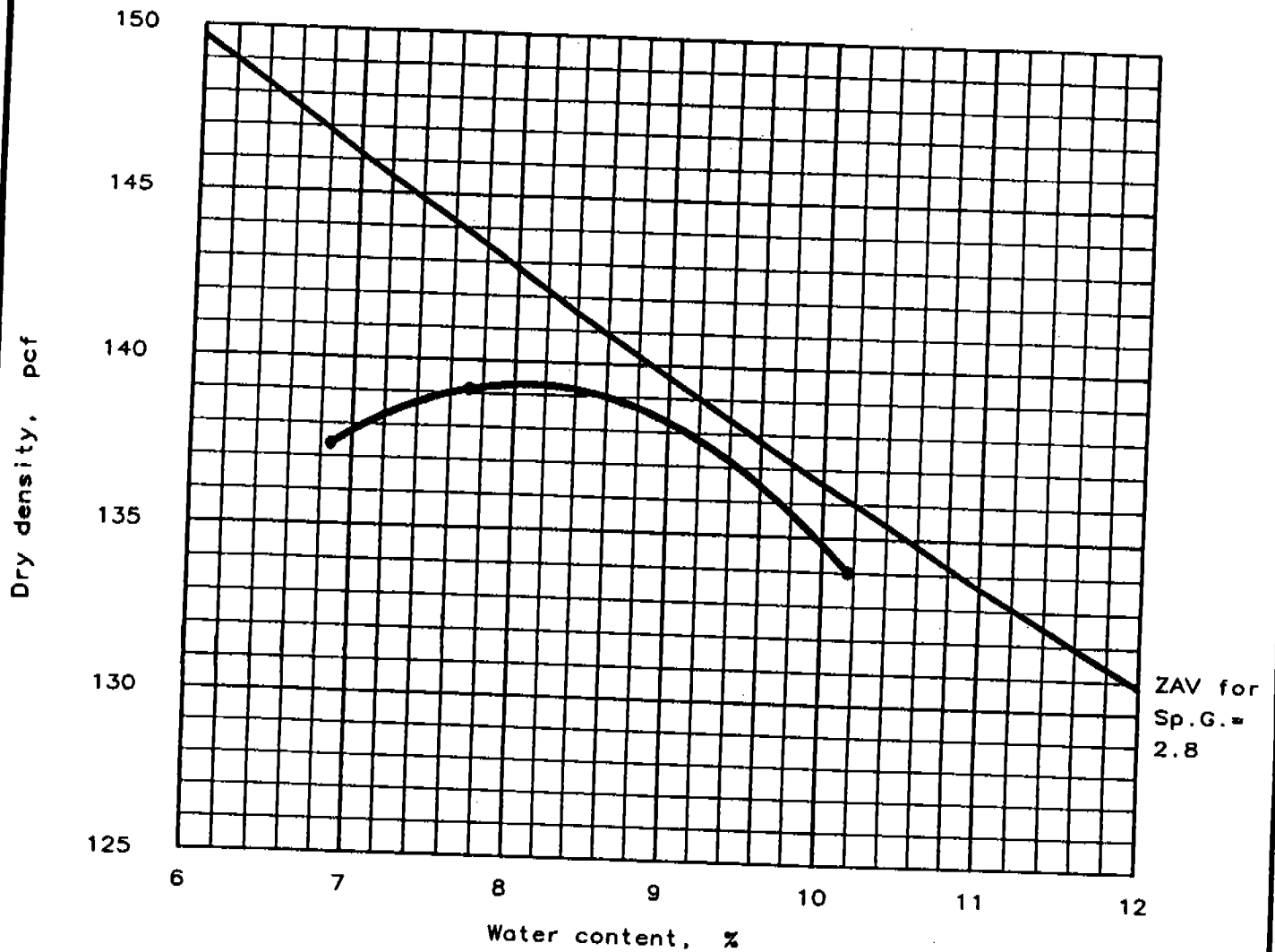
139.3

8.1

RESPECTFULLY SUBMITTED:

THOMAS C. PEGRAM, JR., E.I.T.

# PROCTOR TEST REPORT



"Standard" Proctor, ASTM D 698, Method D

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > 3/4 in	% < No. 200
	USCS	AASHTO						

## TEST RESULTS

Optimum moisture = 8.1 %  
Maximum dry density = 139.3 pcf

## MATERIAL DESCRIPTION

ABC STONE

Project No.: 259-00424-01  
Project: MONTGOMERY WARD INC.  
Location: ON-SITE

Date: 4-14-1993

Remarks:

MONTGOMERY  
WARD INC.

PROCTOR TEST REPORT  
**LAW ENGINEERING**

Figure No. 3